

# Exhibit 18

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE  
COMMISSION,

20 Civ. 10832 (AT)

Plaintiff,

v.

RIPPLE LABS INC., BRADLEY  
GARLINGHOUSE, AND CHRISTIAN A.  
LARSEN,

Defendants.

**SUPPLEMENTAL REPORT OF DANIEL R. FISCHEL**

**May 13, 2022**

## I. INTRODUCTION, ASSIGNMENT, AND SUMMARY OF CONCLUSIONS

1. On October 4, 2021, the SEC submitted the Expert Report of ██████████, Ph.D. (“████████ Report”). On November 12, 2021, I submitted a rebuttal report responding to the analysis in the █████ Report.<sup>1</sup> In that report, I concluded that the analysis in the █████ Report is fundamentally flawed for multiple reasons and provides no support for the SEC’s claim that XRP is a security:<sup>2</sup>

- (i) First, the findings of Dr. █████ event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.
- (ii) Second, Dr. █████ misinterprets his own findings by failing to recognize that many of the announcements that he finds to be statistically significant are confounded.
- (iii) Third, Dr. █████ fails to appreciate the significance of his own admission that XRP did not trade in an efficient market.
- (iv) Fourth, Dr. █████ fails to provide any explanation as to why his event study methodology would shed any light on whether XRP holders are engaged in a “common enterprise” with Ripple.

2. On February 28, 2022, the SEC submitted the Supplemental Expert Report of █████, Ph.D. (“████████ Supplemental Report”). In that report, Dr. █████ purports to “quantify

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<sup>1</sup> Expert Rebuttal Report of Daniel R. Fischel, November 12, 2021 (“Fischel Rebuttal Report”). For a description of my qualifications, prior cases in which I provided expert testimony, and my compensation in this matter, see Fischel Rebuttal Report, Sections I and III and Appendix A. For background information and a description of the SEC claims, see Fischel Rebuttal Report, Section II. Capitalized terms that are not otherwise defined herein are defined in the Fischel Rebuttal Report.

<sup>2</sup> Fischel Rebuttal Report, ¶ 14.

the economic significance of [] XRP price reactions”<sup>3</sup> on 100 event days<sup>4</sup> and reaches two conclusions:

- (i) “But-for the news and public statements related to Ripple to which XRP prices reacted in a statistically significant way, the USD price per XRP token would have rarely exceeded \$0.02.”<sup>5</sup>
- (ii) “Purchasing XRP before the release of the news and public statements related to Ripple on the 100 Event Days would have resulted in greater investment returns than purchasing at other times.”<sup>6</sup>

**A. Dr. [REDACTED] Analysis of the Alleged “But-For” Price of XRP**

3. Dr. [REDACTED] claims that “[he] can interpret statistically significant abnormal returns following the Event Days as attributable to those public statements” because “[t]he [REDACTED] Report establishes that XRP prices react to certain news and public statements related to Ripple.”<sup>7</sup> Therefore, he argues that “the best estimate of the but-for, counterfactual XRP price is found by replacing the actual returns in those instances with the expected returns.”<sup>8</sup> (Emphasis omitted).

4. Specifically, for each of his 20 regression models, Dr. [REDACTED] constructs a counterfactual price series using the following methodology:<sup>9</sup>

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<sup>3</sup> [REDACTED] Supplemental Report, ¶ 7.

<sup>4</sup> See [REDACTED] Supplemental Report, ¶ 8. Note that the Dr. [REDACTED] originally analyzed 105 event days in the “Select Categories” analysis in his opening report—however, in the [REDACTED] Supplemental Report, Dr. [REDACTED] excludes “5 instances of Digital Asset Trading Platform Listings which [he] could not definitively attribute to the efforts of Ripple Labs based on the set of news [he] analyzed.” *Id.*

<sup>5</sup> [REDACTED] Supplemental Report, ¶ 9 (p. 2). See also, id., ¶¶ 10-19.

<sup>6</sup> [REDACTED] Supplemental Report, ¶ 9 (p. 3). See also, id., ¶¶ 20-24.

<sup>7</sup> [REDACTED] Supplemental Report, ¶ 10.

<sup>8</sup> [REDACTED] Supplemental Report, ¶ 10.

<sup>9</sup> See [REDACTED] Supplemental Report, ¶ 12. Dr. [REDACTED] assesses the statistical significance of the event days’ (cumulative) abnormal returns based on the 5% one-sided level.

- For event days where the one-day abnormal return is statistically significant and positive, Dr. [REDACTED] replaces the actual return with the expected return predicted by the model.
- For event days where the two-day cumulative abnormal return is statistically significant and positive (and the one-day return is not statistically significant and negative), Dr. [REDACTED] replaces the actual returns for those two days with the expected returns predicted by the model.
- For event days where the three-day cumulative abnormal return is statistically significant and positive (and neither the one-day nor two-day returns are statistically significantly and negative), Dr. [REDACTED] replaces the actual returns for those three days with the expected returns predicted by the model.
- For event days where none of the above are true, Dr. [REDACTED] does not adjust the actual return.

5. Based on this analysis, Dr. [REDACTED] finds that the “maximum 95th percentile counterfactual price is just \$0.0242, meaning that XRP prices would have only rarely exceeded about two cents but-for the news or public statements related to Ripple Labs.”<sup>10</sup>

#### **B. Dr. [REDACTED] Analysis of Investment Returns Around Event Days**

6. Dr. [REDACTED] conducts an analysis to (supposedly) “answer the following questions: what would the average return be if an investor bought at closing prices before each of the 100 Event Days, and how would that compare to the average return if she did not?”<sup>11</sup> Specifically, he compares the average 1-, 3-, 7-, and 28-day returns for three categories of hypothetical investors: (1) those who invest in XRP on an event day (i.e., purchase XRP at the closing price

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<sup>10</sup> [REDACTED] Supplemental Report, ¶ 16.

<sup>11</sup> [REDACTED] Supplemental Report, ¶ 20.

the day before the event); (2) those who invest in XRP on a non-event day; and (3) those who invest in XRP on non-event days and have no event days in the holding period.<sup>12</sup>

7. Among other things, Dr. [REDACTED] analysis finds that “an investor investing on the Event Day (i.e., purchasing at the closing price of the day before) would earn an average 28-day return of 63.1% compared to an average return of 21.3% earned when investing on any other days” and that “[e]xcluding those 28 day holding periods which include Event Days, the average return falls to just 7.5%.”<sup>13</sup> Therefore, he concludes that an “investor who timed investments in XRP around these Ripple Events would have earned substantially greater returns than an investor who did not.”<sup>14</sup>

### C. Assignment and Summary of Conclusions

8. I have been asked by counsel for Ripple to review, evaluate, and respond to the analysis and conclusions in the [REDACTED] Supplemental Report from an economics perspective. Based on my review of the economic evidence, I conclude as follows.<sup>15</sup>

9. The analysis in the [REDACTED] Supplemental Report is predicated on Dr. [REDACTED] false and misleading claim that “[t]he [REDACTED] Report demonstrates that XRP prices reacted to certain news and public statements related to Ripple.”<sup>16</sup> As discussed in the Fischel Rebuttal Report, the analysis in the [REDACTED] Report cannot and does not establish that XRP prices reacted solely or

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<sup>12</sup> See [REDACTED] Supplemental Report, ¶ 21. See also, id., Figures 6 and 7 (pp. 10-11).

<sup>13</sup> [REDACTED] Supplemental Report, ¶ 22.

<sup>14</sup> [REDACTED] Supplemental Report, ¶ 24.

<sup>15</sup> A list the materials we have relied upon in connection with the preparation of this report is attached as Appendix C.

<sup>16</sup> [REDACTED] Supplemental Report, ¶ 7. See also, id., ¶ 10.

primarily to information about Ripple’s efforts.<sup>17</sup> Therefore, there is no economic basis for Dr. █ to “quantify the economic significance of those XRP price reactions,”<sup>18</sup> when he has not and cannot establish that those XRP price reactions are primarily or solely related to information about Ripple’s efforts.

10. In summary, the █ Supplemental Report does not address any of the fundamental flaws that were discussed in the Fischel Rebuttal Report, and thus his new analysis suffers from the exact same fundamental flaws. In other words:

- (i) The findings of Dr. █ analysis do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.
- (ii) Dr. █ once again misinterprets his own findings by failing to recognize that many of the announcements that he finds to be statistically significant are confounded.
- (iii) Dr. █ once again fails to appreciate the significance of his own admission that XRP did not trade in an efficient market.
- (iv) Dr. █ once again fails to provide any explanation as to why the findings of his analysis would shed any light on whether XRP holders are engaged in a “common enterprise” with Ripple.

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<sup>17</sup> See e.g., Fischel Rebuttal Report, ¶¶ 17-20.

<sup>18</sup> █ Supplemental Report, ¶ 7.

**II. THE ANALYSIS IN THE █████ SUPPLEMENTAL REPORT IS FUNDAMENTALLY FLAWED AND PROVIDES NO SUPPORT FOR THE SEC'S CLAIM THAT XRP IS A SECURITY**

**A. The Findings of Dr. █████ Analysis Do Not Demonstrate That XRP Holders Profit Solely or Primarily from the Efforts of Ripple**

11. Although Dr. █████ has testified that he is not offering an opinion on whether XRP holders profit solely or primarily from the efforts of Ripple and that his event study methodology cannot answer such questions,<sup>19</sup> the analysis in the █████ Supplemental Report attempts (at least in part) to respond to my opinion that the findings of Dr. █████ event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.<sup>20</sup> However, the findings of Dr. █████ new analysis still do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.

12. To begin with, Dr. █████ finding that removing significant, positive abnormal returns on event days results in an estimate of the alleged “but-for” price of XRP being lower than the actual price of XRP is a tautology that does not establish that XRP holders profit solely

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<sup>19</sup> See e.g., Deposition Transcript of █████, February 18, 2022 (“█████ Dep. Tr.”) at 228:25-229:8 and 231:3-232:3.

<sup>20</sup> See e.g., █████ Supplemental Report, ¶ 13 and note 20 (citing to Fischel Rebuttal Report, ¶ 20). See also, *id.*, note 10 (citing to Fischel Rebuttal Report, ¶ 18). For example, Dr. █████ claims that his analysis of the alleged “but-for” price of XRP is “precisely the analysis which Prof. Fischel endorses” because “Prof. Fischel questions the extent to which XRP holders profited from the events studied in the █████ Report, *even assuming the abnormal returns related to those events are the results of Ripple’s efforts.*” (Emphasis added.) █████ Supplemental Report, note 10. However, this is a clear misreading of the Fischel Rebuttal Report because the paragraph that Dr. █████ cites actually states: “Even if one were to assume that the event days analyzed in Dr. █████ ‘Select Categories’ test were solely or primarily related to the efforts of Ripple—*which, as I discuss in Section IV.B infra, they are not*—the findings of his event study methodology do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple.” (Emphasis added.) Fischel Rebuttal Report, ¶ 18.

or primarily from the efforts of Ripple. That is to say, by definition, removing positive abnormal returns<sup>21</sup> on any days (i.e., event days or non-event days) will always result in a lower “but-for” price estimate. As discussed in the Fischel Rebuttal Report, 76.3% to 89.5% of days with significantly positive XRP returns had no news about Ripple’s efforts analyzed by Dr. █<sup>22</sup> However, Dr. █ did not attempt to analyze the impact of removing positive significant abnormal returns on non-event days, nor did he compare the impact of removing positive significant abnormal returns on event days vs. non-event days.

13. Dr. █ also claims that that “investor who timed investments in XRP around these Ripple Events would have earned substantially greater returns than an investor who did not.”<sup>23</sup> Specifically, he claims that “an investor investing on the Event Day (i.e., purchasing at the closing price of the day before) would earn an average 28-day return of 63.1% compared to an average return of 21.3% earned when investing on any other days” and that “[e]xcluding those 28 day holding periods which include Event Days, the average return falls to just 7.5%.”<sup>24</sup> However, Dr. █ analysis of investment returns around event days is misleading and does not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple for multiple reasons.

- First, in this analysis, Dr. █ not only fails to do anything to account for the impact of confounding information or the fact that the XRP market was not efficient, he also inexplicably fails to control for any other market factors that

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<sup>21</sup> As discussed in the Fischel Rebuttal Report, Dr. █ event study methodology is designed to identify event days with significantly positive XRP returns. See Fischel Rebuttal Report, ¶ 12(iii).

<sup>22</sup> See Fischel Rebuttal Report, ¶ 20 and Exhibit 1.

<sup>23</sup> █ Supplemental Report, ¶ 24.

<sup>24</sup> █ Supplemental Report, ¶ 22.

affect XRP prices—in direct contrast to his event study methodology and analysis of the alleged “but-for” price of XRP.

- Second, as discussed below, Dr. [REDACTED] event days are confounded by, among other things, other announcements that Dr. [REDACTED] identified. On average, Dr. [REDACTED] 100 event days have two additional announcements falling within +/- 3 days from the event day, four announcements falling within +/- 7 days from the event date, and five announcements falling within +/- 10 days from the event day. See Exhibit 3. Longer periods, such as the 28-day holding period that Dr. [REDACTED] uses in his analysis, are even more likely to include confounding announcements.
- Third, Dr. [REDACTED] event days only generate higher returns on average through 2017, a period during which the XRP market was particularly inefficient.<sup>25</sup> Therefore, any inference drawn from price reactions during that period are particularly unreliable. After 2017, an individual investing on an event day (i.e., purchasing at the closing price of the day before) would earn an average 28-day return of 1.5% compared to an average 28-day return of 1.3% earned when investing on any other days or an average 28-day return of 9.9% when there is no event day in the investment period. See Exhibit 4.
- Finally, Dr. [REDACTED] averages are driven entirely by a small number of days with extraordinarily high returns. If one excludes the top 10 event days, the average 28 day return for an investor investing on the event day (i.e., purchasing at the closing price of the day before) falls from 63.1% to 7.4%, which is similar to the 7.5% average 28-day return for an investor with no event day in the investment period. See Exhibit 4.

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<sup>25</sup> See e.g., [REDACTED] Report, Appendix F, Figure 1 (p. 3), showing statistically significant autocorrelation in XRP returns occurred throughout the period analyzed by Dr. [REDACTED] and particularly prior to 2018. Dr. [REDACTED] states that “during these periods [where autocorrelation is statistically significant], [he] can reject the hypothesis that XRP prices are even weak form efficient.” *Id.*, p. 2.

**B. Dr. ██████ Once Again Misinterprets His Own Findings by Failing to Recognize that Many of the Announcements that He Finds to be Statistically Significant are Confounded**

14. As discussed in the Fischel Rebuttal Report, the announcements that Dr. ██████ analyzed confound information about Ripple's efforts with information about market conditions for XRP and may also be further confounded by other announcements that fall on or near the event day, which may not be related to Ripple's efforts.<sup>26</sup> In his deposition, Dr. ██████ acknowledged that the presence of confounding events could "potentially" undermine the reliability of his findings.<sup>27</sup> However, he also claimed that, given his "robustness checks" (i.e., he uses models that control for the returns of other digital tokens, he did not find any correlation between events and price movements three days before the announcement, and his results hold for 1-day and 7-day event windows), "it becomes so implausible to suggest that [] hypothetical confounding news could be driving [his] results."<sup>28</sup>

15. In fact, Dr. ██████ "robustness checks" cannot address the fact that the announcements that Dr. ██████ analyzed themselves contain confounding information about market conditions for XRP, such as information related to the expected supply and demand for XRP and information about the decisions and expectations of market participants other than Ripple, none of which is solely or primarily related to Ripple's efforts or under Ripple's direct or indirect control.<sup>29</sup> Likewise, given the fact that the XRP market is not semi-strong efficient (i.e., it takes XRP prices longer to fully reflect new information without bias), as discussed below,

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<sup>26</sup> See Fischel Rebuttal Report, Section IV.B.

<sup>27</sup> ██████ Dep. Tr. at 193:16-20.

<sup>28</sup> ██████ Dep. Tr. at 195:2-197:20.

<sup>29</sup> See Fischel Rebuttal Report, ¶ 21.

Dr. [REDACTED] “robustness checks” also cannot address the potential impact of confounding announcements that fall on or near the event day.

16. As discussed in the Fischel Report, Dr. [REDACTED] himself identifies a number of potentially confounding announcements on or near his event days.<sup>30</sup> On average, Dr. [REDACTED] 100 event days have two additional announcements falling within 3 days of the event day, four announcements falling within 7 days of the event date, and five announcements falling within 10 days of the event day. See Exhibit 3. This exhibit also shows that potentially confounding announcements fall on or near the specific event days that Dr. [REDACTED] finds to be statistically significant. For example, there are 14 event days that are statistically significant in at least 95% of Dr. [REDACTED] models (i.e., statistically significant in 19 or more models), and these event days have, on average, two additional announcements falling within 3 days of the event day, three additional announcements falling within 7 days of the event date, and five additional announcements falling within 10 days of the event day. See Exhibit 3.

17. In other words, Dr. [REDACTED] assertion that “[he] can interpret statistically significant abnormal returns following the Event Days as attributable to those public statements”<sup>31</sup> is false and misleading because he ignores the fact that some or all of his estimated significant abnormal returns may be attributed to: (1) confounding information about market conditions for XRP disclosed in the announcements that Dr. [REDACTED] analyzed, and (2) confounding information disclosed in other announcements that fall on or near the event day.

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<sup>30</sup> See Fischel Rebuttal Report, ¶ 25 and Exhibit 2.

<sup>31</sup> [REDACTED] Supplemental Report, ¶ 10.

**C. Dr. █████ Once Again Fails to Appreciate the Significance of His Own Admission that XRP Did Not Trade in an Efficient Market**

18. In his analysis of the “but-for” price of XRP, Dr. █████ attempts to use the same event study methodology from the █████ Report to quantify the alleged impact of the event days that he finds to be significant—that is to say, his counterfactual XRP price series are constructed based on the output of his event study methodology. In doing so, Dr. █████ once again fails to appreciate the significance of his own admission that XRP did not trade in an efficient market.<sup>32</sup>

19. In his deposition, Dr. █████ claimed that semi-strong market efficiency is only necessary to draw certain inferences from an event study, such as drawing an inference from an absence of price movement, but he claimed that the types of inferences that he draws from his event study methodology do not require semi-strong market efficiency.<sup>33</sup> This claim is fundamentally incorrect with regards to the analysis in the █████ Report (wherein Dr. █████ uses his event study methodology to “test whether XRP returns are associated with news about Ripple”<sup>34</sup>) and even more so with regards to the analysis in the █████ Supplemental Report (wherein Dr. █████ uses his event study methodology to estimate counterfactual XRP prices).

20. As discussed in the Fischel Rebuttal Report, when an event study is used to measure the impact of certain events on market prices, it is explicitly assumed that the market is semi-strong or informationally efficient, i.e., that market prices adjust to new information quickly and without bias.<sup>35</sup> It is an undisputed fact that the XRP market was not efficient during

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<sup>32</sup> The significance of the lack of market efficiency with regards to Dr. █████ event study methodology was discussed in detail in Section IV.C of the Fischel Rebuttal Report.

<sup>33</sup> See e.g., █████ Dep. Tr. at 94:12-96:8.

<sup>34</sup> █████ Report, ¶ 28.

<sup>35</sup> Fischel Rebuttal Report, ¶ 27.

the relevant period.<sup>36</sup> As a result, it is not appropriate to use an event study methodology to quantify the impact of events on XRP prices—which is exactly what Dr. [REDACTED] attempts to do in constructing his counterfactual XRP price series.

21. In other words, because XRP prices during the relevant period did not adjust to new information quickly and without bias, Dr. [REDACTED] estimates of the “but-for” price of XRP are unreliable, biased estimates. For example, if price reactions to certain announcements overshoot during the first three days before ultimately correcting, Dr. [REDACTED] counterfactual XRP price series would be adjusted to exclude the overshooting (i.e., he would replace the actual returns for those three days with the expected returns predicted by his models) but would not be adjusted to exclude the eventual price correction—resulting in a downward biased estimate.

22. Moreover, Dr. [REDACTED] assertion in his deposition that the inferences that he draws from his event study methodology do not require semi-strong market efficiency is particularly incorrect with regards to the analysis in the [REDACTED] Supplemental Report because he is attempting to use his event study methodology to quantify the magnitude of price reactions in addition to the materiality of price reactions. In fact, Dr. [REDACTED] analysis of the alleged “but-for” price of XRP is analogous to a common application of event studies to quantify damages in securities fraud litigation<sup>37</sup>—an application which is predicated on the assumption that the subject security trades in a semi-strong efficient market.

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<sup>36</sup> Dr. [REDACTED] agrees that XRP did not trade in efficient market during the relevant period. See e.g., [REDACTED] Report, ¶ 35; see also, [REDACTED] Dep. Tr. at 93:22-94:3.

<sup>37</sup> See e.g., Kevin L. Gold, Eric Korman, and Ahmer Nabi, “Federal Securities Acts and Areas of Expert Analysis,” Chapter 27 in Litigation Services Handbook: The Role of the Financial Expert (Roman L. Weil, Daniel G. Lentz, and Elizabeth A. Evans eds., 6<sup>th</sup> ed. John Wiley & Sons, 2017), p. 12: “For the out-of-pocket measure of damages used in most cases filed

23. In his deposition, Dr. █ claimed that it was unnecessary for him to “assign causality to a particular event” or to “assign causation to one or the other [event]” and instead claimed that “[i]t’s enough that prices moved around that announcement.”<sup>38</sup> However, the analysis in the █ Supplemental Report attempts to do exactly that—both in his analysis of the alleged “but-for” price of XRP, where he concludes that “approximately two dozen events are, in fact, economically significant,”<sup>39</sup> and in his analysis of investment returns around event days, where he concludes that his results “demonstrates the economic significance of the Ripple Events in the history of XRP prices.”<sup>40</sup> There is no economic basis for Dr. █ to assess the supposed “economic significance” of these event days with statistically significant XRP price reactions when he has not and cannot establish that those price reactions are primarily or solely related to information about Ripple’s efforts.

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under § 10(b) of the Securities Exchange Act of 1934, experts estimate the but-for price: the value of the security absent (i.e., but-for) the fraud. ... Many of these approaches use the event study method. ... to measure the security’s price decline associated with curative disclosures.”

See also, David I. Tabak and Frederick C. Dunbar, “Materiality and Magnitude: Event Studies in the Courtroom,” Chapter 19 in Litigation Services Handbook: The Role of the Financial Expert (Roman L. Weil, Michael J. Wagner, and Peter B. Frank Elizabeth A. Evans eds., 3<sup>rd</sup> ed. John Wiley & Sons, 2001), p. 3: “Event studies can also measure the size of a stock price movement as the basis for a damages calculation. For example, in cases of securities fraud, experts commonly measure changes in the alleged inflation in a stock price by the movement in that stock price in the wake of a corrective disclosure, after controlling for market, industry, and other company-specific influences. This results from the disclosure’s removing the inflation, and an event study measures the change in inflation in the stock at the time of the disclosure. Often, courts find that this is the best estimate of the inflation per share if the defendant had a duty to disclose the same information that the corrective disclosure revealed. As a result, an event study is a common method that serves as the basis for quantifying damages in securities fraud cases.”

<sup>38</sup> █ Dep. Tr. at 205:9-207:2.

<sup>39</sup> █ Supplemental Report, ¶ 15.

<sup>40</sup> █ Supplemental Report, ¶ 24.

24. Dr. █ acknowledged in his deposition that his event study methodology can only demonstrate that there is some correlation between his event days and statistically significant XRP returns but cannot prove causation.<sup>41</sup> However, Dr. █ also argued that “[t]he question of what kind of inference you can draw from a statistical result depends on your economic understanding of the [] facts of the matter and maybe some other robustness checks that you may run to rule out alternative explanations” and then opined that his findings support “an inference of [] likely causation.”<sup>42</sup> Dr. █ has not explained how or why his “economic understanding” of the facts of this litigation support an inference of “likely” causation. Additionally, Dr. █’s “robustness checks” cannot address the fact that many of the announcements that he finds to be statistically significant are confounded (as discussed above) and, likewise, cannot address the fact that the XRP market is not semi-strong efficient (i.e., it takes XRP prices longer to fully reflect new information without bias).

25. In his deposition, Dr. █ also claimed that, even though the XRP market is not semi-strong efficient, his application of the event study methodology in the █ Report is appropriate because the academic literature he cited similarly applied the event study methodology in cryptocurrency markets, many of which are also not semi-strong efficient.<sup>43</sup> In fact, none of the articles that Dr. █ cited use event studies to test whether or not digital tokens are securities (or whether returns are “associated” with the announcements of a specific entity),

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<sup>41</sup> See e.g., █ Dep. Tr. at 242:9-15 and 242:24-25.

<sup>42</sup> █ Dep. Tr. at 242:16-24.

<sup>43</sup> See e.g., █ Dep. Tr. at 93:14-17, 94:16-18, 95:24-96:4.

nor do they attempt to construct but-for counterfactual prices based on the results of their event studies.<sup>44</sup> For example:

- Feng et al. (2018) does not actually use an event study methodology, but they do perform a regression that includes dummy variables for positive and negative Bitcoin events.<sup>45</sup> However, unlike the event study methodology, the dependent variable in their regression is not returns but instead an “order-size based measure to detect informed trading.”<sup>46</sup> Based on this regression, they “find evidence of informed trading in the Bitcoin market prior to both positive and negative large events.”<sup>47</sup>
- Joo et al. (2020) “attempt to explore reactions of the cryptocurrency market to positive and negative events utilizing event study methodology” and uses their results to “identify the possible profit-making opportunities based on the speed of information flow.”<sup>48</sup> They state that the objective of their article is “to provide evidence of potential positive trading opportunities in the market.”<sup>49</sup> In other

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<sup>44</sup> As discussed in the Fischel Rebuttal Report, there are two primary reasons to use an event study: 1) to test the null hypothesis that a market is semi-strong efficient (i.e., to test whether market prices efficiently incorporate publicly available information); and 2) under the hypothesis of a semi-strong efficiency, to measure the impact of certain events on market prices. See Fischel Rebuttal Report, ¶ 32.

<sup>45</sup> Wenjun Feng, Yiming Wang, and Zhengjun Zhang, “Informed Trading in the Bitcoin Market,” *Finance Research Letters* Vol. 26, 2018, pp. 63-70 at p. 65.

<sup>46</sup> Weng et al. (2018), p. 64. “First, we propose a novel indicator to detect and assess informed trades ahead of cryptocurrency events, based on the buy-sell trade size imbalances.” *Id.*

<sup>47</sup> Weng et al. (2018), p. 64. “Applying a novel indicator that we design for the cryptocurrency market, we find evidence of informed trading in the Bitcoin market ahead of cryptocurrency-related negative Bitcoin market events, and ahead of large positive events. … The evidence of informed trading in the Bitcoin market suggests that people who get information before it’s widely available, profit on their private information, at the cost of other market participants’ losses.” *Id.*, p. 68.

<sup>48</sup> Mohammad Hashemi Joo, Yuka Nishikawa, and Krishnan Dandapani, “Announcement effects in the cryptocurrency market,” *Applied Economics* Vol. 52, No. 44, 2020, pp. 4794-4808 at p. 4796.

<sup>49</sup> Joo et al. (2020), p. 4796.

words, they use an event study to demonstrate how the lack of semi-strong efficiency in digital token markets can result in positive trading opportunities.

- Gerritsen et al. (2021) uses an event study to examine Bitcoin abnormal returns to bullish, neutral, and bearish predictions of crypto experts published by various sources such as business news outlets (e.g., Bloomberg and CNBC) and Bitcoin-specific news agencies and forums to which bitcoin.org refers (e.g., CoinDesk, CoinTelegraph, etc.).<sup>50</sup> They find that neutral and bearish predictions are associated with statistically significant negative abnormal returns, but bullish predictions do not result in statistically significant abnormal returns, and conclude that “crypto experts are an important contributor to price discovery on the Bitcoin market and that especially their nonpositive predictions improve the market’s efficiency.”<sup>51</sup>
- Schaub (2021) uses an event study to examine the returns of Bitcoin, Ether and three stablecoins (Tether, BinanceCoin, and USDCoin) to the January 4, 2021 announcement by the Office of the Comptroller of the Currency (OCC) that federally chartered banks and thrifts were now allowed to utilize stablecoins as payment instruments.<sup>52</sup> His event study does not use any regression models to predict cryptocurrency returns and instead examines actual daily and cumulative returns during the event window.<sup>53</sup>

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<sup>50</sup> Dirk F. Gerritsen, Rick A.C. Lugtigheid, and Thomas Walther, “Can Bitcoin Investors Profit from Predictions by Crypto Experts?” *Finance Research Letters*, 2021 (forthcoming) at p. 2.

<sup>51</sup> Gerritsen et al. (2021), p. 6.

<sup>52</sup> Mark Schaub, “On the OCC Announcement Allowing US Banks to Use Stablecoins and the Immediate Impact on Cryptocurrency Valuations,” *The Economics and Finance Letters* Vol. 8, 2021, pp. 154-158 at p. 154.

<sup>53</sup> See Schaub (2021), pp. 155-157.

**D. Dr. [REDACTED] Once Again Fails to Provide Any Explanation as to Why the Findings of His Analysis Would Shed Any Light on Whether XRP Holders are Engaged in a “Common Enterprise” with Ripple**

26. As discussed in the Fischel Rebuttal Report, Dr. [REDACTED] has not explained the relationship between his findings and the SEC’s claim that XRP is a security under the *Howey Test*, and the event study methodology used by Dr. [REDACTED] cannot and does not establish whether XRP holders are engaged in a “common enterprise” with Ripple, much less whether those holders were led to expect profits or returns generated solely or primarily from the entrepreneurial or managerial efforts of Ripple.<sup>54</sup> In his deposition, Dr. [REDACTED] agreed that “[a]n event study is not going to answer a legal question,” although he also claimed (without providing any further explanation) that “[i]t may provide information which might be useful to the finder of fact who’s ultimately going to settle the legal question.”<sup>55</sup> He also testified that he is not offering an opinion on whether XRP holders profit solely or primarily from the efforts of Ripple.<sup>56</sup>

27. Dr. [REDACTED] has not addressed these issues in the [REDACTED] Supplemental Report and, for all of the reasons discussed above, his analysis cannot and does not establish whether XRP holders are engaged in a “common enterprise” to share profits or returns generated solely or primarily by the entrepreneurial or managerial efforts of Ripple.

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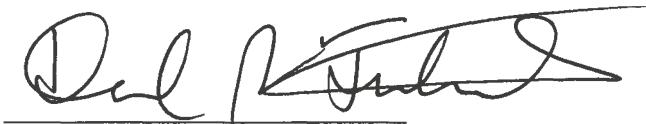
<sup>54</sup> Fischel Rebuttal Report, ¶ 31.

<sup>55</sup> [REDACTED] Dep. Tr. at 68:13-18.

<sup>56</sup> See e.g., [REDACTED] Dep. Tr. at 228:25-229:8, 231:3-232:3.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 13, 2022.

A handwritten signature in black ink, appearing to read "Del R. Johnson". The signature is written in a cursive style with a horizontal line underneath it.

**Exhibit 3****Number of Other Announcements Identified by Dr. [REDACTED] On or Near Event Days**

	[A]: # of Other Announcements Identified by Dr. [REDACTED] On or Near the Event Day			[B]: # of Models Where Dr. [REDACTED] Finds the Event Day to Be Statistically Significant
	+/- 3 Days	+/- 7 Days	+/- 10 Days	
<b>Average:</b>				
All Event Days	2	4	5	4
Event Days that are Significant in 1 or More Models	1	3	5	13
Event Days that are Significant in 10 or More Models	2	4	6	18
Event Days that are Significant in 19 or More Models	2	3	5	20

**By Event Day:**

1	05/05/2014	-	-	-	2
2	06/12/2014	1	2	2	-
3	07/21/2014	1	2	4	-
4	07/29/2014	1	2	3	-
5	09/24/2014	1	1	1	-
6	10/27/2014	1	5	6	-
7	11/04/2014	2	3	4	-
8	12/03/2014	1	2	4	-
9	04/29/2015	3	5	6	-
10	05/18/2015	1	4	4	-
11	06/09/2015	-	4	7	-
12	10/06/2015	-	1	1	5
13	10/13/2015	-	2	2	-
14	12/16/2015	1	4	4	-
15	01/29/2016	2	6	8	12
16	02/29/2016	-	2	2	-
17	04/19/2016	-	3	4	-
18	05/26/2016	1	2	2	-
19	06/13/2016	2	3	4	20
20	06/22/2016	1	4	6	16
21	07/18/2016	2	3	3	-
22	08/19/2016	4	5	6	-
23	09/15/2016	1	2	4	20
24	09/23/2016	2	4	7	20
25	09/28/2016	2	5	7	16
26	10/09/2016	2	4	6	12
27	10/20/2016	2	4	4	-
28	12/12/2016	1	3	3	-
29	01/09/2017	3	4	5	-
30	01/10/2017	4	4	5	20
31	02/15/2017	2	2	4	-
32	02/28/2017	1	3	4	-
33	03/02/2017	1	4	4	20
34	03/07/2017	1	3	4	18
35	03/17/2017	1	1	3	4
36	03/30/2017	1	1	2	20
37	03/31/2017	1	1	1	20

**Exhibit 3****Number of Other Announcements Identified by Dr. [REDACTED] On or Near Event Days**

	[A]: # of Other Announcements Identified by Dr. [REDACTED] On or Near the Event Day			[B]: # of Models Where Dr. [REDACTED] Finds the Event Day to Be Statistically Significant
	+/- 3 Days	+/- 7 Days	+/- 10 Days	
<b>Average:</b>				
All Event Days	<b>2</b>	<b>4</b>	<b>5</b>	4
Event Days that are Significant in 1 or More Models	1	3	5	13
Event Days that are Significant in 10 or More Models	2	4	6	18
Event Days that are Significant in 19 or More Models	<b>2</b>	<b>3</b>	<b>5</b>	20

**By Event Day:**

38	04/26/2017	-	-	2	3
39	05/16/2017	1	2	3	10
40	05/18/2017	1	2	3	-
41	06/29/2017	-	-	-	-
42	07/10/2017	1	2	3	-
43	09/11/2017	-	1	1	-
44	10/10/2017	1	5	7	-
45	10/13/2017	3	7	7	-
46	11/16/2017	2	4	4	-
47	11/22/2017	1	4	5	-
48	12/05/2017	3	5	5	-
49	12/08/2017	3	4	6	19
50	12/12/2017	-	7	10	20
51	12/19/2017	5	8	12	13
52	01/11/2018	4	9	13	-
53	01/16/2018	2	8	10	-
54	01/24/2018	1	7	9	-
55	02/07/2018	1	4	9	1
56	02/08/2018	1	4	9	18
57	02/13/2018	3	5	8	-
58	02/14/2018	3	8	8	-
59	02/21/2018	2	4	8	-
60	03/01/2018	2	6	9	-
61	03/06/2018	4	6	6	-
62	03/24/2018	2	5	5	-
63	04/11/2018	1	2	2	3
64	04/12/2018	1	2	2	2
65	04/26/2018	4	4	6	-
66	05/07/2018	2	4	6	-
67	05/14/2018	1	3	6	-
68	05/26/2018	2	3	8	-
69	06/27/2018	2	2	3	-
70	08/16/2018	2	3	3	20
71	09/05/2018	2	4	5	8
72	09/13/2018	1	4	6	-
73	09/19/2018	-	1	4	20
74	09/28/2018	5	9	11	-

**Exhibit 3****Number of Other Announcements Identified by Dr. [REDACTED] On or Near Event Days**

	[A]: # of Other Announcements Identified by Dr. [REDACTED] On or Near the Event Day			[B]: # of Models Where Dr. [REDACTED] Finds the Event Day to Be Statistically Significant
	+/- 3 Days	+/- 7 Days	+/- 10 Days	
<b>Average:</b>				
All Event Days	2	4	5	4
Event Days that are Significant in 1 or More Models	1	3	5	13
Event Days that are Significant in 10 or More Models	2	4	6	18
Event Days that are Significant in 19 or More Models	2	3	5	20

**By Event Day:**

75	10/01/2018	8	9	10	-
76	11/14/2018	3	5	5	-
77	12/13/2018	1	2	2	-
78	01/08/2019	1	1	2	-
79	02/05/2019	2	5	5	-
80	03/12/2019	-	1	1	-
81	06/17/2019	-	1	1	2
82	09/27/2019	2	4	5	-
83	09/30/2019	2	5	8	-
84	10/02/2019	2	7	8	-
85	10/09/2019	3	7	9	-
86	10/14/2019	1	7	10	14
87	11/06/2019	3	3	3	4
88	12/10/2019	2	2	3	-
89	12/20/2019	-	-	3	-
90	01/21/2020	1	1	2	-
91	02/04/2020	-	1	3	20
92	02/12/2020	1	2	3	19
93	02/25/2020	1	2	3	-
94	02/26/2020	1	2	3	-
95	03/19/2020	1	2	3	4
96	04/27/2020	3	4	7	20
97	06/15/2020	3	6	6	-
98	10/06/2020	3	5	8	-
99	10/08/2020	3	7	8	-
100	10/28/2020	-	4	5	-

[A]: Same analysis as presented in Exhibit 2 of the Fischel Rebuttal Report.

[B]: Reports the number of Dr. [REDACTED] models where the event day was significant under the one-sided parametric test (the baseline test in the [REDACTED] Report). Based on Dr. [REDACTED] backup production.

**Exhibit 4****Expansion of Dr. ██████████ Analysis of Investment Returns Around Event Days****[A]: Return on Investment by Holding Period**

	1 Day	3 Day	7 Day	28 Day
<b>Average Return - Invest on Event Day:</b>				
Full Period*	3.0%	11.5%	13.2%	63.1%
Through 2017	5.4%	19.2%	23.5%	122.2%
After 2017	0.5%	3.4%	2.6%	1.5%
Top 10 Event Days**	27.3%	102.4%	122.6%	563.8%
Excl. Top 10 Event Days**	0.3%	1.4%	1.1%	7.4%
<b>Average Return - Do Not Invest on Event Day:</b>				
Full Period*	0.3%	1.0%	3.5%	21.3%
Through 2017	0.6%	1.8%	5.8%	34.3%
After 2017	(0.0%)	(0.1%)	(0.0%)	1.3%
<b>Average Return - No Event Day in Investment Period:</b>				
Full Period*	0.3%	0.8%	2.6%	7.5%
Through 2017	0.6%	1.5%	4.2%	6.2%
After 2017	(0.0%)	(0.2%)	(0.1%)	9.9%
<b>Investment Return by Event Day:</b>				
1	05/05/2014	3.8%	26.4%	(18.6%)
2	06/12/2014	(8.4%)	(9.1%)	(12.3%)
3	07/21/2014	(0.4%)	14.1%	(3.8%)
4	07/29/2014	(1.5%)	(15.7%)	(19.2%)
5	09/24/2014	1.2%	0.1%	0.7%
6	10/27/2014	7.5%	5.0%	2.6%
7	11/04/2014	(0.1%)	1.4%	1.9%
8	12/03/2014	(0.2%)	4.7%	14.5%
9	04/29/2015	3.1%	5.1%	3.7%
10	05/18/2015	(9.2%)	4.9%	7.6%
11	06/09/2015	(0.1%)	0.5%	7.2%
12	10/06/2015	6.4%	0.5%	5.0%
13	10/13/2015	2.2%	2.6%	(4.1%)
14	12/16/2015	1.1%	(4.4%)	(7.3%)
15	01/29/2016	9.9%	2.8%	11.9%
16	02/29/2016	0.4%	1.8%	(0.4%)
17	04/19/2016	1.9%	6.4%	4.2%
18	05/26/2016	(1.5%)	(1.3%)	0.9%
19	06/13/2016	(0.5%)	17.7%	16.4%
20	06/22/2016	5.2%	4.2%	9.7%
21	07/18/2016	(0.9%)	(2.2%)	(3.9%)
22	08/19/2016	(0.0%)	(1.1%)	(0.7%)
23	09/15/2016	39.3%	17.7%	14.6%
24	09/23/2016	5.4%	14.8%	30.3%

## Exhibit 4

## Expansion of Dr. ██████████ Analysis of Investment Returns Around Event Days

## [A]: Return on Investment by Holding Period

		1 Day	3 Day	7 Day	28 Day
25	09/28/2016	10.0%	7.3%	(4.6%)	8.0%
26	10/09/2016	3.2%	12.6%	11.4%	12.6%
27	10/20/2016	5.4%	4.0%	2.4%	(9.1%)
28	12/12/2016	0.5%	(0.6%)	(2.5%)	(7.6%)
29	01/09/2017	(1.1%)	2.9%	7.9%	3.4%
30	01/10/2017	8.6%	4.2%	10.1%	4.6%
31	02/15/2017	(2.1%)	(5.5%)	(7.1%)	1.6%
32	02/28/2017	(1.3%)	6.8%	8.0%	71.1%
33	03/02/2017	10.8%	16.5%	20.4%	86.8%
34	03/07/2017	7.9%	7.3%	5.4%	445.2%
35	03/17/2017	(4.3%)	8.1%	65.5%	437.7%
36	03/30/2017	31.5%	116.7%	251.9%	224.8%
37	03/31/2017	57.3%	360.5%	145.9%	162.2%
38	04/26/2017	1.4%	37.5%	66.6%	899.7%
39	05/16/2017	29.3%	34.8%	17.5%	(6.2%)
40	05/18/2017	(7.4%)	(10.8%)	(24.9%)	(29.4%)
41	06/29/2017	(5.4%)	(9.2%)	(8.6%)	(38.0%)
42	07/10/2017	(12.9%)	(12.0%)	(36.5%)	(22.7%)
43	09/11/2017	0.7%	(5.7%)	(16.2%)	31.4%
44	10/10/2017	3.5%	(1.4%)	1.7%	(18.2%)
45	10/13/2017	4.9%	6.3%	(13.4%)	(12.4%)
46	11/16/2017	6.6%	7.3%	12.2%	121.2%
47	11/22/2017	2.4%	4.8%	28.2%	239.2%
48	12/05/2017	(3.0%)	(12.1%)	(0.7%)	842.4%
49	12/08/2017	13.2%	6.5%	287.9%	1,336.3%
50	12/12/2017	48.4%	243.4%	209.3%	877.4%
51	12/19/2017	1.7%	52.9%	43.9%	115.8%
52	01/11/2018	(1.0%)	2.5%	(33.5%)	(63.3%)
53	01/16/2018	(29.8%)	(4.8%)	(19.0%)	(35.7%)
54	01/24/2018	1.5%	(9.0%)	(14.9%)	(18.7%)
55	02/07/2018	(6.8%)	22.9%	32.7%	18.9%
56	02/08/2018	11.2%	47.8%	57.5%	20.3%
57	02/13/2018	(4.6%)	6.5%	5.6%	(25.8%)
58	02/14/2018	10.7%	10.7%	5.8%	(23.3%)
59	02/21/2018	(6.4%)	(8.4%)	(13.1%)	(34.9%)
60	03/01/2018	2.6%	0.4%	(3.7%)	(36.1%)
61	03/06/2018	(3.8%)	(13.9%)	(16.5%)	(47.8%)
62	03/24/2018	(0.3%)	(6.8%)	(20.8%)	43.7%
63	04/11/2018	9.7%	29.7%	33.5%	65.5%
64	04/12/2018	16.5%	17.2%	31.4%	48.7%
65	04/26/2018	6.5%	7.9%	7.3%	(25.1%)
66	05/07/2018	(4.5%)	(8.0%)	(14.4%)	(23.0%)
67	05/14/2018	(0.6%)	(4.2%)	(6.1%)	(21.1%)

## Exhibit 4

## Expansion of Dr. ██████████ Analysis of Investment Returns Around Event Days

[A]: Return on Investment by Holding Period

		1 Day	3 Day	7 Day	28 Day
68	05/26/2018	0.3%	(9.6%)	2.0%	(20.3%)
69	06/27/2018	3.2%	(0.6%)	6.4%	0.4%
70	08/16/2018	3.7%	16.0%	13.4%	(4.2%)
71	09/05/2018	(14.5%)	(12.1%)	(20.5%)	57.0%
72	09/13/2018	3.9%	4.4%	20.7%	71.2%
73	09/19/2018	1.3%	74.4%	63.7%	46.1%
74	09/28/2018	(0.4%)	7.4%	(2.7%)	(15.4%)
75	10/01/2018	(0.9%)	(9.2%)	(17.1%)	(20.5%)
76	11/14/2018	(7.0%)	(7.5%)	(14.8%)	(40.9%)
77	12/13/2018	(2.4%)	(7.0%)	14.5%	20.7%
78	01/08/2019	0.3%	(8.7%)	(8.4%)	(17.6%)
79	02/05/2019	(0.3%)	(2.9%)	0.8%	1.6%
80	03/12/2019	(0.3%)	0.6%	2.0%	15.1%
81	06/17/2019	4.8%	2.2%	9.5%	(28.3%)
82	09/27/2019	0.1%	(1.0%)	1.7%	14.2%
83	09/30/2019	6.0%	5.0%	6.8%	23.5%
84	10/02/2019	1.6%	1.7%	11.6%	21.0%
85	10/09/2019	1.1%	(2.7%)	3.7%	8.2%
86	10/14/2019	6.7%	2.4%	5.9%	0.9%
87	11/06/2019	2.9%	(8.1%)	(9.6%)	(27.0%)
88	12/10/2019	(0.5%)	(2.5%)	(8.1%)	(1.8%)
89	12/20/2019	2.4%	3.2%	(0.2%)	19.8%
90	01/21/2020	1.7%	(3.1%)	(0.9%)	22.8%
91	02/04/2020	4.8%	10.8%	7.7%	(6.2%)
92	02/12/2020	8.7%	19.5%	6.4%	(24.2%)
93	02/25/2020	(6.4%)	(12.4%)	(11.8%)	(41.8%)
94	02/26/2020	(8.9%)	(6.7%)	(7.5%)	(36.0%)
95	03/19/2020	15.3%	10.6%	12.9%	26.7%
96	04/27/2020	0.6%	15.5%	11.5%	(0.7%)
97	06/15/2020	0.8%	0.9%	(3.1%)	4.6%
98	10/06/2020	(2.2%)	0.3%	2.2%	(6.1%)
99	10/08/2020	1.2%	2.3%	0.4%	(4.3%)
100	10/28/2020	(2.8%)	(5.4%)	(5.3%)	173.7%

[A]: Calculated based on XRP daily returns data from Dr. ██████████ backup production.

\* Returns reported in Figures 6 and 7 in the ██████████ Supplemental Report (pp. 10-11).

\*\* For each holding period, the event days with the 10 highest returns are denoted by blue shaded boxes.

## APPENDIX C

### Materials Relied Upon

#### **Legal Documents & Expert Reports**

*Securities and Exchange Commission v. Ripple Labs, et al.*, First Amended Complaint, February 18, 2021

Expert Report of [REDACTED], Ph.D., October 4, 2021

Expert Rebuttal Report of Daniel R. Fischel, November 12, 2021

Deposition Transcript of [REDACTED], February 18, 2022

Supplemental Expert Report of [REDACTED], Ph.D., February 28, 2022

#### **Academic Literature & Textbooks**

David I. Tabak and Frederick C. Dunbar, “Materiality and Magnitude: Event Studies in the Courtroom,” Chapter 19 in *Litigation Services Handbook: The Role of the Financial Expert* (Roman L. Weil, Michael J. Wagner, and Peter B. Frank Elizabeth A. Evans eds., 3<sup>rd</sup> ed. John Wiley & Sons, 2001)

Kevin L. Gold, Eric Korman, and Ahmer Nabi, “Federal Securities Acts and Areas of Expert Analysis,” Chapter 27 in *Litigation Services Handbook: The Role of the Financial Expert* (Roman L. Weil, Daniel G. Lentz, and Elizabeth A. Evans eds., 6<sup>th</sup> ed. John Wiley & Sons, 2017)

Wenjun Feng, Yiming Wang, and Zhengjun Zhang, “Informed Trading in the Bitcoin Market,” *Finance Research Letters* Vol. 26, 2018, 63-70

Mohammad Hashemi Joo, Yuka Nishikawa, and Krishnan Dandapani, “Announcement effects in the cryptocurrency market,” *Applied Economics* Vol. 52, No. 44, 2020, 4794-4808

Dirk F. Gerritsen, Rick A.C. Lutgildheid, and Thomas Walther, “Can Bitcoin Investors Profit from Predictions by Crypto Experts?” *Finance Research Letters*, 2021 (forthcoming)

Mark Schaub, “On the OCC Announcement Allowing US Banks to Use Stablecoins and the Immediate Impact on Cryptocurrency Valuations,” *The Economics and Finance Letters* Vol. 8, 2021, 154-158

***All other documents cited in Appendix B of the Fischel Rebuttal Report.***